

**REMARKS**

Please note the fact that January 28, 2007, fell on a Sunday ensures that this paper is timely filed as of today, Monday, January 29, 2007 (the next succeeding day which is not a Saturday or Sunday).

Applicants and the undersigned are most grateful for the time and effort accorded the instant application by the Examiner. Claims 1-9 were pending in the instant application at the time of the outstanding Office Action. Of these claims, Claims 1, 4, 5, 6, and 7 are independent claims; the remaining claims are dependent claims. The Office is respectfully requested to reconsider the rejections presented in the outstanding Office Action in light of the following remarks.

**Rejection of claims 1-13 under 35 U.S.C. § 101:**

Claims 1-13 stand rejected as being directed to non-statutory subject matter under 35 U.S.C. § 101.

Specifically the Examiner states the following:

Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The claims are directed to a method, process or system for calculating the reciprocal square root of a number via a mathematical algorithm. The claims are not limited to a practical application of the mathematical algorithm because the reciprocal square root result in not a useful, concrete and tangible result. More specifically the result is not a tangible result because it is not as real-world result.

The claims are also directed to a program per se. Which the program contains functionally descriptive material the recording of the functionally descriptive material on some computer-readable medium, which would enable the functionality to be realized, fails to be recited.

With regards to statutory subject matter under § 101, Applicants respectfully submit that in order to qualify as statutory subject matter a claimed invention need only accomplish a practical application by producing a useful, tangible, and concrete result.

MPEP § 2106(II)(A).

Applicants respectfully submit that claims 1-9 qualify as statutory subject matter under § 101. Independent claims 1, 4, and 7 recite, *inter alia*, the following limitations: "**rounding** said estimate to a lower precision", "using a Taylor Expansion to **compute** the polynomial in said residual of said estimate to obtain the residual error", "**multiplying** said rounded estimate by said residual error" and "**adding** the result to said rounded estimate". Applicants respectfully submit that the independent claims do accomplish a practical application by producing a useful, tangible, and concrete result. Applicants also note that the Examiner did not address these limitations in the current rejection but rather simply stated that the claims did not lead to a tangible result.

Applicants respectfully submit that the current invention, as claimed, amounts to more than just an algorithm or the manipulation of abstract ideas. This is so because while utilizing algorithms the claimed invention produces results that are useful. That the current invention operates via the input of data or information and results in the output of data or information is of no moment.

The Federal Circuit has repeatedly held that processes and systems engaged in the manipulation of data are eligible for patent protection. MPEP 2106(II)(A); *See e.g., State Street Bank & Trust Co. v. Signature Financial Group Inc.*, 149 F.3d 1368 (Fed. Cir. 1994) (holding that transformation of data relating to dollar amounts into data relating to share prices was patentable subject matter).

The crux of the issue of eligibility under Section 101 is not that data is manipulated through the operation of a machine or computer software or even that such manipulation could be conducted mentally (surely the manipulations at issue in *State Street* could be conducted mentally if the manipulations in the current invention can be, as the Examiner asserts). The real issue is whether the claimed invention produces a useful, concrete, and tangible result that is of practical application (i.e., has a certain level of 'real world' value). MPEP 2106(II)(A). For the reasons set forth above Applicants respectfully submit that the current invention, as claimed, meets the requirements for eligible subject matter under Section 101. The rejection is therefore improper.

For the foregoing reasons, Applicants respectfully submit that claims 1-9 are directed towards statutory subject matter. Applicants respectfully request that the Examiner withdraw the rejection of claims 1-9 under 35 U.S.C. § 101.

**Request for Telephone Interview:**

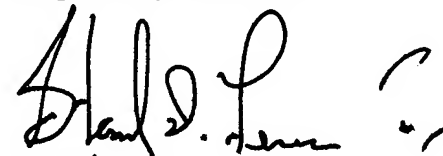
The above Remarks notwithstanding the Applicants recognize and understand the focus of the Patent Office on ensuring that claims meet the statutory requirements of Section 101. To that end, should the Examiner, upon re-evaluation of the current

rejection in light of the foregoing Remarks, deem that a rejection under 35 U.S.C. § 101 is still proper; Applicants and their undersigned representative kindly request the courtesy of a Telephone Interview so that an agreement may be reached as to how the claims might be amended in order to satisfy Section 101 before the issuance of a Final Rejection.

The "prior art made of record" has been reviewed. Applicants acknowledge that such prior art was not deemed by the Office to be sufficiently relevant as to have been applied against the claims of the instant application. To the extent that the Office may apply such prior art against the claims in the future, Applicants will be fully prepared to respond thereto.

In summary, it is respectfully submitted that the instant application, including Claims 1-9, is presently in condition for allowance. Notice to the effect is hereby earnestly solicited. If there are any further issues in this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,



Stanley D. Ference III  
Registration No. 33,879

**Customer No. 35195**  
**FERENCE & ASSOCIATES**  
409 Broad Street  
Pittsburgh, Pennsylvania 15143  
(412) 741-8400  
(412) 741-9292 - Facsimile

Attorneys for Applicants